CRISIS ON THE NATIONAL FORESTS:
CONTAINING THE THREAT OF WILDLAND FIRE TO THE ENVIRONMENT AND COMMUNITIES

Patrick Moore, Ph.D.
Chairman and Chief Scientist

Greenspirit Strategies Ltd.

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As an ecologist, co-founder of Greenpeace, and a lifelong environmentalist I find myself in an era where many other environmentalists have adopted policies that would see millions starve in Africa rather than eat perfectly safe genetically modified corn, that oppose dams producing renewable hydroelectric power in China when the alternative is non-renewable coal, and that would see forest fires kill every living thing rather than support sustainable forestry and the use of renewable wood, I fashion myself the Sensible Environmentalist. And there is nowhere a greater need for some common sense than in the debate over how to manage the National Forests and other public forest lands.

There is simply no sense in allowing conditions to prevail that inevitably result in uncharacteristic and catastrophic wildfires. The waste of renewable resources, the destruction of wildlife, the loss of soil and siltation of rivers, the release of vast amounts of carbon dioxide, and the loss of property and sometimes human life are things to be avoided, not encouraged. This is especially true when one considers how simple it is, through the application of time-tested silvicultural practices, to maintain forests in a state that minimizes such catastrophic outcomes.

There are two primary root causes of the forest conditions on federal public lands today. The first is constitutional and political. Most of the federal public lands are in the West, and most of the population and politicians who determine the fate of these lands are in the East. This imbalance in electoral accountability has led to policies that satisfy remote interests while stifling more local ones. The second root cause is ideological and stems from the fact that many powerful environmental groups are basically anti-forestry and favor policies that reduce the use of wood rather than encourage its use as a renewable resource. They promote a policy of “cut fewer trees – use less wood”. A Sensible Environmentalist knows that the correct policy is “grow more trees – use more wood”. This in turn requires active management, the application of scientifically-based silvicultural treatments, and the productive use of the wood thus obtained.

The active management of the majority of public forests; to reduce fire risk, to enhance wildlife habitat, to protect life and property, and to obtain wood, in no way contradicts the desirability of maintaining a world-class system of protected areas where industrial activity is restricted or banned. The Word Wildlife Fund official policy is that 10% of the world’s forests should be off-limits to industrial use. That is a reasonable policy but it begs the question of what to do with the remaining 90%. A Sensible Environmentalist would favor sustainabley managed forests producing high volumes of wood while taking the needs of wildlife and biodiversity into account.

The anti-forestry activists are telling us that the way to save forests is to let them burn to the ground. Last summer I toured forests in Idaho with a group that included former Forest Service Chief Jack Ward Thomas. We witnessed the devastation caused by uncharacteristic wildfires in the Ponderosa Pine forest in the high country northeast of Boise. (Here are a few images from that field trip).

These photographs show that even after 15-20 years the forest has not recovered from the devastation caused by uncharacteristic wildfires. The soil was burned off exposing bare rock. Erosion continues, sending debris into rivers where it damages

fish habitat. A beautiful, biodiverse Ponderosa pine forest has been reduced to a barren landscape that will take decades to recover.

I am not saying that fire in forests is always bad for the environment. Fire can be a very useful tool for managing fuel loads and enhancing wildlife habitat. But fire is a tool that should only be used by professionals trained in forest science, not by idealists with the naïve notion that because fire is “natural” it is automatically good for the environment. The inferno that began in the Bandelier National Monument near Los Alamos, New Mexico in May 2000 is a classic case in point. The park officials who started this fire did so with good intentions. But they failed to take into account the fact that over 50 years of fire prevention had resulted in a fuel load build-up that nearly guaranteed the catastrophic results that ensued. The only solution in these circumstances is manual and mechanical removal of wood to reduce the fuel load. In some types of forest it may then be possible to manage fuel loads with prescribed fire. In other forest types, especially where there are homes and other property at risk, mechanical thinning and harvesting are the only practical options.

It is therefore essential that the present legislative and policy obstacles to implementing active management of National Forests and other federal forest lands be removed. It is unfortunate that some activist groups characterize this need as being destructive to the environment when it is actually the only way to break the present environmentally destructive pattern of fuel build-up followed by catastrophic wildfire. I wish legislators, policymakers, and all those responsible in the field well in bringing about these very necessary changes in law and practice.

(Please see the attached excerpt from my book “Green Spirit – Trees are the Answer”)

Fire in the Mountains (Excerpt from Green Spirit – Trees are the Answer, Patrick Moore, 2000)

While the changes caused by ice are as slow as glaciers, the destruction caused by fire is instantaneous by comparison. A lightning strike or a careless camper can burn an entire hillside or valley in a matter of hours. The worst fires last for weeks, destroying new areas each time the wind picks up to fan the flames. Forest fires spark fear in humans and animals alike. If you find yourself in the wrong place at the wrong time the flames cannot be outrun.

Public attitudes towards forest fires have always been strong. Fear, fascination, and anxiety over environmental and economic devastation have combined to generate powerful opinions. People who live in communities surrounded by forest want to be able to control fires so their towns don’t get burned to the ground. Foresters view fire as sometimes beneficial and sometimes harmful, depending on a wide range of factors. Many environmental activists take the view that since fires are natural occurrences they are therefore good and should generally not be controlled.

Little can be gained by arguing about whether forest fires in general are good or bad. First, forest fires come in a great variety of sizes and intensities. Some fires burn a small area and kill only the shrubs and ground-cover, leaving the trees alive. Other fires kill virtually everything over vast areas including the seeds and soil, leaving the site sterile and subject to erosion. Second, while forest fires are often "good" as a way of temporarily increasing forage for wild grazing animals they are just as often "bad" for soil, trees, fish, birds, and humans. We tend to think worse of wildfires the larger the insurance claim when there is loss of human life and property. This may seem reasonable to us but it has little to do with the health of forest ecosystems.

For the sake of discussion forest fires can be placed in one of three groups: those started by lightning, those started by humans through carelessness or accident, and those caused by humans on purpose, often called "prescribed burning." Wherever forests are valued for timber, recreation, and wildlife, efforts are taken to control wildfires to protect these values. In 1924 the US Congress passed the Clarke-McNary Act, an agreement among forest land owners, the western States, and the Federal government to cooperate in controlling fires. A monument at Snoqualmie Falls in Washington State commemorates the historical meeting where the agreement was reached. Since that time fighting fire has become a sophisticated enterprise employing satellite surveillance, helicopters, fire-retardant chemicals and water bombers, in

addition to the traditional fire-spotters in mountaintop watchtowers. Each year thousands of fires are reported and most of them are controlled before they spread very far. Some of them get away and do a lot of damage before they are contained.

In British Columbia, fire control is the responsibility of the provincial government. In an average year some 2,500 wildfires are reported, of which about half are caused by lightning and half by people. In addition, hundreds of fires are ignited on purpose for a number of reasons including brush control, preparation of harvested areas for planting, and improving grazing land for wildlife and cattle.

Forest fire control has had a significant impact on the "natural" cycle of forest disturbance and renewal that occurred prior to the advent of modern forest management. Areas severely burned were particularly large during periods of drought. Even today, in the far northern boreal forest of Alaska, Yukon, and the Northwest Territories, where there is little incentive to control fires, vast areas are burned by lightning strikes nearly every year. When these fires spread without any intervention they have sometimes wiped out whole mountainsides and valleys. If the soil is badly burned it can take decades for the forest to recover on exposed rock. These periods of catastrophic burning were followed by periods of re-growth and a new succession of forests that were burned again when conditions were right. Today, in areas where forests are commercially valuable, most potentially devastating fires are put out before they get out of control but there are still many fires that defy early attempts at control and burn large areas.

Some species of plants and trees are specially adapted to survive forest fires. Trees such as Douglas-fir, western larch, and longleaf pine have thick bark that protects them from ground fires. The seeds of some trees are adapted to survive all but the hottest blaze and some of their cones actually require heat from fire to trigger the release of seeds. The nutrients in the ashes from fires, so long as heavy rains do not wash them away, provide a basis for rapid growth of new plants on the site.

Foresters realize that in some areas small frequent ground fires play an important role in reducing the potential for eventual catastrophic fires. The ground fires can clear away the accumulation of dead wood and brush before the fuel load becomes large enough to support a fire that kills the trees. While this might lead one to think that fires should therefore be allowed to burn whenever they start it is not that simple. It is often difficult to tell in advance if a particular fire is the kind you want or if it might develop into an inferno that wipes out a whole forest. When there are towns nearby the decision becomes even more difficult. This is a good example of a real-life situation that requires judgment based on experience and knowledge. The answer cannot be found in a rule or regulation and even the wisest person will get it wrong sometimes. It's instructive to consider two examples of situations where judgments were questioned and where there has never been a resolution on the subject of whether a wildfire should have been put out or not.

In the summer of 1994 there was a large forest fire near Penticton in the Okanagan Valley of British Columbia. The fire started in rugged hills south of the town in timber not considered valuable. Initially, winds were light and blowing away from the town so forestry and environment officials decided to let it burn as a way of clearing off the fuel load and improving grazing for wild mountain sheep. This worked fine until a few days later when the wind came in strong from the south and fanned the flames in the direction of the town of 35,000. I watched as the pines exploded in flame and the blaze leapt from tree to tree. Whole suburbs were evacuated, 18 homes were burned down, and the town's electrical supply was threatened. Water bombers were called in from Vancouver Island and as far away as Ontario to combat the blaze and save the town. Luckily the combined efforts of forestry firefighters, water bombers, and the Penticton Fire Department kept the damage confined to the outskirts. Needless to say, government officials came under severe public criticism for not doing more to extinguish the fire. Even so, environmentalists and wildlife advocates declared that the fire would result in improved wildlife grazing habitat.

A much larger fire began in July of 1988 during a hot dry summer in Yellowstone National Park.[1] At first the officials in charge decided to let the fires burn as part of the natural cycle. As the summer progressed the fires became more numerous and spread throughout the park. Local environmentalists strongly opposed controlling the fires even though they were spreading outside the park into commercially valuable forest. Loggers, ranchers, and residents of nearby communities wanted the fires stopped. By September the main lodge at Old Faithful was threatened with destruction and the decision on action was passed all the way up to the White House. By the time President George Bush ordered the National Guard in as firefighters, a massive effort was required to subdue the blazes, ultimately costing over $120 million. In the aftermath those in favor of controlling such fires before they get out of control felt they had been right all along. The

environmentalists disagreed, stating that even though it had been finally judged necessary to put the fires out that they had been beneficial to the ecosystem. They believed the forest would recover quickly from this "natural" event.

Eight years later I visited Yellowstone, and made extensive observations on the effects of the fire, which in the end affected over a million acres (400,000 hectares), nearly 50 percent of the area of the park. There are huge areas of forest where all the trees and plants were killed and there are other vast stretches where the forest was partially burned. It soon became clear to me that depending on where one looked, a case could be made for both positions regarding the impact on the ecosystem. In some areas, where the fire had not been severe, new lodgepole pine seedlings have grown back so thick they look like a green carpet. These sites will recover fairly quickly. But in other extensive areas, such as the Lewis River canyon, all the trees are dead and very few new trees have grown back. These areas were so hot that the seeds were burned and the phosphorous in the soil was vaporized. The only vegetation after eight years is from seeds like fireweed and cottonwood that have blown in on the wind. The soil has been heavily eroded in places and it will take many decades before a healthy new forest becomes established.

It is one thing to debate the merits of forest destruction by fire in a park and quite another when commercially valuable timber is at stake. It is even more problematic when a fire starts in a park and then spreads outside the park into areas designated for forestry. The two land uses, parks and timber production, are managed according to different values. In the park we care about aesthetics, recreation, and an environment not dominated by the material needs of people. On commercial forest lands we care about wood production, wildlife, and recreation. Fire is not aware of these distinctions and does not respect the boundaries between them.

I don’t believe there is an absolute right or wrong answer to the question of whether a particular fire should burn or not. Wildfires in forests, whether caused by lightning or people, remind us that we are not always in control of the outcome of events. The only rational approach is the combined use of experience, careful judgment, and common sense. It is just as foolish to reject efforts to control forest fires as it is to think they should always be put out. The most reasonable approach must balance forest health, timber supply, human safety, and property protection. Such a complex mix of factors, each depending on circumstance, cannot be reduced to a simple formula.

In many of the areas where it is practiced, logging has replaced fire as the major cause of change in the forest. To some extent clearcutting and other forms of harvesting can "mimic" the impact of fire in the evolution and successional development of the forest. This is discussed later in this chapter.

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[1] Micah Morrison, Fire in Paradise: The Yellowstone Fires and the Politics of Environmentalism, HarperCollins, New York, 1993.